U.S. Department of Transportation
Federal Highway Administration

US 95, MP 42 to Cibola Lake Road
EVALUATION MATRIX

ADOT

EVALUATION CRITERIA	"NO ACTION" ALTERNATIVE	ALTERNATIVE A New Northbound East of Existing US 95 (Southbound Along Existing US 95)	ALTERNATIVE B New Southbound West of Existing US 95 (Northbound Along Existing US 95)	ALTERNATIVE C New Northbound and Southbound (Eliminate Existing US 95)	ALTERNATIVE D Combination of Alternatives A & B
Right-of-Way Needs	No new right-of-way.	Approximately 183 acres of additional R/W needed.	Approximately 176 acres of additional R/W needed.	Approximately 182 acres of additional R/W needed.	Approximately 177 acres of additional R/W needed.
Environmental Impacts	Small effect on air quality and animal impacts due to increased traffic volumes.	Possible short term sediment discharge into washes. Loss of indigenous desert flora and possible reduction of wildlife habitat on new corridor. Nationwide permit or individual permit for proposed impacts will be needed.	Possible short term sediment discharge into washes. Loss of indigenous desert flora and possible reduction of wildlife habitat on new corridor. Nationwide permit or individual permit for proposed impacts will be needed.	The two new roadways will have greater potential to impact washes and plant species as both roadways will be built on previously undisturbed ground. This will potentially lengthen permitting processes and require additional mitigation measures. Nationwide permit or individual permit for proposed impacts will be needed.	Impacts east washes and plant species overall through better use of the existing roadway, thereby limiting project footprint and associated impacts. Nationwide permit or individual permit for proposed impacts will be needed.
Land Use Impacts	Unchanged.	A majority of the land on the project is unused and is managed by either Yuma Proving Ground or Bureau of Land Management. Impact to land use is low.	A majority of the land on the project is unused and is managed by either Yuma Proving Ground or Bureau of Land Management. Impact to land use is low.	A majority of the land on the project is unused and is managed by either Yuma Proving Ground or Bureau of Land Management. Impact to land use is low.	A majority of the land on the project is unused and is managed by either Yuma Proving Ground or Bureau of Land Management. Impact to land use is low.
Wildlife/Habitat Impacts	Vehicle strikes with wildlife may increase due to higher traffic volumes.	Impact on two wildlife linkages. Wildlife friendly fencing and potential wildlife crossings should reduce vehicle strikes with wildlife.	Impact on two wildlife linkages. Wildlife friendly fencing and potential wildlife crossings should reduce vehicle strikes with wildlife.	Impact on two wildlife linkages. Wildlife friendly fencing and potential wildlife crossings should reduce vehicle strikes with wildlife.	Impact on two wildlife linkages. Wildlife friendly fencing and potential wildlife crossings should reduce vehicle strikes with wildlife.
Threatened / Endangered / Sensitive Species Affected ▪ **Plant** ▪ **Animal** ▪ **Wildlife Species of Concern** ▪ **Noise**	Endangered Species: No endangered plant species. No identified critical habitat for threatened or endangered species. No plant removal. Noise: Potential increase in noise level due to increased traffic volumes.	Endangered Species: No endangered plant species. No identified critical habitat for threatened or endangered species. Possible Saguaro removal. Noise: Potential increase in noise level.	Endangered Species: No endangered plant species. No identified critical habitat for threatened or endangered species. Possible Saguaro removal. Noise: Potential increase in noise level.	Endangered Species: No endangered plant species. No identified critical habitat for threatened or endangered species. Possible Saguaro removal. Noise: Potential increase in noise level.	Endangered Species: No endangered plant species. No identified critical habitat for threatened or endangered species. Possible Saguaro removal. Noise: Potential increase in noise level.
Earthwork	None.	3.2 Million CY of Borrow will be needed. 0.7 Million CY of Excavation will be generated. Surrounding onsite material along route appears to be suitable for roadway construction. Sandy, gravel material will likely make for good roadway embankment and subgrade if permission to use can be arranged.	3.4 Million CY of Borrow will be needed. 0.7 Million CY of Excavation will be generated. Surrounding onsite material along route appears to be suitable for roadway construction. Sandy, gravel material will likely make for good roadway embankment and subgrade if permission to use can be arranged.	5.0 Million CY of Borrow will be needed. 1.6 Million CY of Excavation will be generated. Surrounding onsite material along route appears to be suitable for roadway construction. Sandy, gravel material will likely make for good roadway embankment and subgrade if permission to use can be arranged.	3.0 Million CY of Borrow will be needed. 0.8 Million CY of Excavation will be generated. Surrounding onsite material along route appears to be suitable for roadway construction. Sandy, gravel material will likely make for good roadway embankment and subgrade if permission to use can be arranged.
Use of Existing Road	No change.	Existing roadway will be used as southbound US 95. Reconstruction to existing roadway will be required.	Existing roadway will be used as northbound US 95. Reconstruction to existing roadway will be required.	Existing roadway will be removed.	Existing roadway will be used as both northbound and southbound US 95 at different locations. Reconstruction to existing roadway will be required.

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Roadway Geometry	Design exceptions will be required. There are vertical curves that do not meet stopping sight distance requirements for a recommended minimum design speed of 60 mph. There are horizontal curves with superelevations less than the recommended values for a recommended minimum design speed of 60 mph. From 2001 to 2005, 99 crashes were reported. With increased traffic volumes, it is expected that the number of crashes would grow proportionally.	No design exceptions will be required. New northbound roadway will conform to ADOT design standards for 70 mph. Existing roadway (proposed southbound) will require reconstruction to improve areas that do not meet ADOT design standards for 70 mph. Divided roadway, fencing, and possible wildlife crossings will improve safety.	No design exceptions will be required. New southbound roadway will conform to ADOT design standards for 70 mph. Existing roadway (proposed northbound) will require reconstruction to improve areas that do not meet ADOT design standards for 70 mph. Divided roadway, fencing, and possible wildlife crossings will improve safety.	No design exceptions will be required. Both new northbound and southbound roadways will conform to ADOT design standards for 70 mph. Divided roadway, fencing, and possible wildlife crossings will improve safety.	No design exceptions will be required. New roadways will conform to ADOT design standards for 70 mph. Existing roadway will require reconstruction to improve areas that do not meet ADOT design standards for 70 mph. Divided roadway, fencing, and possible wildlife crossings will improve safety.
Constructability & Traffic Control	None.	Detours expected for bridge demolition/construction. Some rock excavation may be expected. Straight forward construction for new northbound lanes. Maintain traffic on existing US 95 and build new northbound lanes. Will require reconstruction of three major turnouts. Will impact turnout to Aberdeen Road and the large wash running parallel to the existing roadway at this location.	Detours expected for bridge demolition/construction. Some rock excavation may be expected. Straight forward construction for new southbound lanes. Maintain traffic on existing US 95 and build new southbound lanes. Will require reconstruction of 4 major turnouts. Will impact turnout to Imperial Dam Road and will require relocation of the two gun exhibits located at this intersection.	Detours expected for bridge demolition/construction. More rock excavation will be required to construct two new roadways. Both northbound and southbound roadways will be new. Construction will be more challenging due to the proximity of the proposed alignments to the existing US 95 roadway. Construction phasing will be necessary to maintain traffic. Traffic control will be substantial since the construction footprint for the new roadways will impact the existing roadway. Will require reconstruction of all turnouts. Will impact turnout to Aberdeen Road and the large wash running parallel to the existing roadway at this location. Will impact turnout to Imperial Dam Road and will require relocation of the two gun exhibits located at this intersection.	Detours expected for bridge demolition/construction. Some rock excavation may be expected. New lanes will switch between being constructed left and right of the existing roadway. There will be some minor shifting of traffic to allow for constructing the transition sections where the existing roadway switches between being used as the northbound and southbound lanes. Maintain traffic on existing US 95 and build new roadway and cross over connections. Four crossover locations will be required. Will require reconstruction of 4 major turnouts. No impact to Aberdeen Road and the large wash running parallel to the existing roadway at this location. No impact to Imperial Dam Road or the two gun exhibits located at this intersection.
Estimated Construction Cost	On-going maintenance costs.	$185,000,000	$189,000,000	$238,000,000	$183,000,000
Maintain Access to Adjacent Properties	No change.	Access to adjacent properties will be maintained. Access locations will be provided in accordance with the approved Access Management Plan.	Access to adjacent properties will be maintained. Access locations will be provided in accordance with the approved Access Management Plan.	Access to adjacent properties will be maintained. Access locations will be provided in accordance with the approved Access Management Plan.	Access to adjacent properties will be maintained. Access locations will be provided in accordance with the approved Access Management Plan.

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Drainage/Floodplains	No change. Dip crossings will remain and existing roadway will continue to flood.	Construct an all weather roadway by upgrading culverts and removing dip crossings along the existing roadway. New northbound section will provide for an all weather roadway. Substantial area of impact on waters of the US.	Construct an all weather roadway by upgrading culverts and removing dip crossings along the existing roadway. New southbound section will provide for an all weather roadway. Less area of impact on waters of the US.	Both new roadways will provide for an all weather roadway. Substantial area of impact on waters of the US.	Construct an all weather roadway by upgrading culverts and removing dip crossings along the existing roadway. New roadway sections will provide for an all weather roadway. Least area of impact on waters of the US.
Level of Service (LOS) and Capacity MP 42 to Imperial Dam Road (MP 44) Imperial Dam Road to Aberdeen Road (MP 47) Aberdeen Road to GM Proving Ground Entrance (MP 54) GM Proving Ground Entrance to MP 70 MP 42 to Aberdeen Road (MP 47) Aberdeen Road to MP 70	2007 Peak Hour LOS E/C LOS B/A* * Except where the Border Patrol Station is located.	2035 Future Peak Hour LOS D/A LOS C/A LOS B/A LOS A/A Improved emergency accessibility.	2035 Future Peak Hour LOS D/A LOS C/A LOS B/A LOS A/A Improved emergency accessibility.	2035 Future Peak Hour LOS D/A LOS C/A LOS B/A LOS A/A Improved emergency accessibility.	2035 Future Peak Hour LOS D/A LOS C/A LOS B/A LOS A/A Improved emergency accessibility.
Utility Impacts	None	Approximately 18,000 linear feet of power lines will need to be relocated.	Approximately 53,000 linear feet of power lines will need to be relocated.	Approximately 40,000 linear feet of power lines will need to be relocated.	Approximately 31,000 linear feet of power lines will need to be relocated.
Structures	The existing Castle Dome Wash Bridge at MP 53.4 will remain in place with a load rating of HS15.5 and a sufficiency rating of 56.71. The existing bridge does not have the capacity to handle overweight equipment haulers. Three existing YPG equipment crossing locations (MP 42.5, 46.4, and 51.5) will continue to traverse the existing roadway.	The existing Castle Dome Wash Bridge will be replaced with a new bridge. New bridge structures are proposed at two additional locations (MP 61.7 & 69.3) to accommodate the large discharge flows at these locations. New equipment crossing structures are proposed to allow YPG vehicles to cross under the roadway.	The existing Castle Dome Wash Bridge will be replaced with a new bridge. New bridge structures are proposed at two additional locations (MP 61.7 & 69.3) to accommodate the large discharge flows at these locations. New equipment crossing structures are proposed to allow YPG vehicles to cross under the roadway.	The existing Castle Dome Wash Bridge will be replaced with a new bridge. New bridge structures are proposed at two additional locations (MP 61.7 & 69.3) to accommodate the large discharge flows at these locations. New equipment crossing structures are proposed to allow YPG vehicles to cross under the roadway.	The existing Castle Dome Wash Bridge will be replaced with a new bridge. New bridge structures are proposed at two additional locations (MP 61.7 & 69.3) to accommodate the large discharge flows at these locations. New equipment crossing structures are proposed to allow YPG vehicles to cross under the roadway.